ON *LYMANTES* SCHOENHERR (COLEOPTERA, CURCULIONIDAE)[1]

ELBERT L. SLEEPER
Department of Biology
California State College at Long Beach
Long Beach, California

Recently while examining the monumental generic study, Curculionidae of America north of Mexico, of Kissinger (1964) it was noted that *Lymantes* Schoenherr was placed in the unrecognized genera. This brought to mind the fact that the type of the genus, *Lymantes scrobicollis* Gyllenhal, had been examined several years ago and that drawings and notes had been made. This paper is to establish its position in the North American genera of Curculionidae, to bring attention to generic synonymy, and to describe several new forms in the genus.

Upon examination of the type of *Lymantes* it was noted that the types of *Lymantes* and *Typhloglymma* Dury are congeneric. As will be noted in the species discussion to follow, these genera are very closely related and it is impossible to even retain *Typhloglymma* as a subgenus.

The placing of *Lymantes* (as *Typhloglymma*) in the Hylobiinae is a rather arbitrary decision on the part of Kissinger. For ease in keying the genus out it is a rather practical decision. When the generic characteristics are looked at critically and then compared with other genera, it appears that this genus could fit equally well in the Hylobiinae or Cossoninae, and it has many characteristics of the Raymondionyminae as discussed by Gilbert (1956:70-71). However, I am for the present at least, in favor of leaving *Lymantes* in the Hylobiinae as placed by Kissinger with the notation of the following points: *Lymantes* demonstrates certain relationships to *Dryotribus* of the Cossoninae and *Gononotus* and *Metopotoma* of the Hylobiinae. Comparing *Lymantes* with *Dryotribus*, the apex of the rostrum, scrobes, "eye" position, constriction between head and rostrum, number and form of elytral striae, ascending brush of setae on inner edge of tibiae, and the general form are similar. *Dryotribus*, however, lacks the apical comb lateral to the base of the uncus on tibiae 3 and has the forecoxae much more widely separated and the funicle 5-segmented compared to 7 segments in *Lymantes*. Comparing *Lymantes* and *Gononotus* the "eye" position is approximately the same.

[1]Biological Sciences Contribution #16 California State College at Long Beach.

There is a faint indication of a constriction between head and rostrum. The prosternal characteristics, notably the coxal separation and tibia 3 are similar. *Gononotus*, however, has non-expanded apex on rostrum, a scrobe that is more lateral, and while the elytra are also 10-striate, 10 is complete to apex (in *Lymantes* it is short and in basal third only). *Gononotus* lacks the ascending brush on inner edge of tibiae one. The general form is also quite different. *Lymantes* and *Metopotoma* are very close, especially in form, eye position, coxal separation, tibial structure and third tarsal segment. The antennal funicle in *Metopotoma* is 6-segmented.

Lymantes Schoenherr

Lymantes Schoenherr 1838: 1085.

Typhloglymma Dury 1901:243. *New synonymy.*

Type species. Lymantes scrobicollis Gyllenhal

Rostrum about three-fourths as long as prothorax, apical third to two-fifths expanded appearing quadrate from above, distinctly separated from head by a very deep transverse groove; very deeply closely punctate. Scrobes lateral apically, passing inferior, reaching base of rostrum at junction with head. Antennae 7-segmented, inserted near apical third, behind the apical quadrate area of rostrum; scape gradually clavate, attaining or passing below raised ocular area; segment one globular, 2 elongate, obconic, 3-7 quadrate, closely placed, gradually increasing in width. Club moderately large, subglobular and compact. Ocular area on base of rostrum, lateral, minute. *Head* globular. *Prothorax* oblong quadrate, depressed, constricted apically, truncate at apex and base. Scutellum invisible. *Elytra* 10-striate, the 10th short; moderately convex, gradually declivous behind, narrower at posterior third, not larger at base than prothorax and feebly emarginate, conjointly rounded at apex. Metepisterna absent. Forecoxae feebly separated. Femora clavate, the anterior more strongly than the others. Tibiae narrow, a little compressed, slightly arcuate at the apex, which is uncinate; inner edge with a shallow denuded groove or flattened area extending from base to apex, tibiae one with apical comb lateral of uncus and a short dorsal comb on posterior side, tibiae 2 and 3 with only apical combs lateral of the uncus. Tarsi short, filiform, first three segments with a narrow brush of setae each side of middle of venter; fourth segment long. Claws slender and feebly divergent.

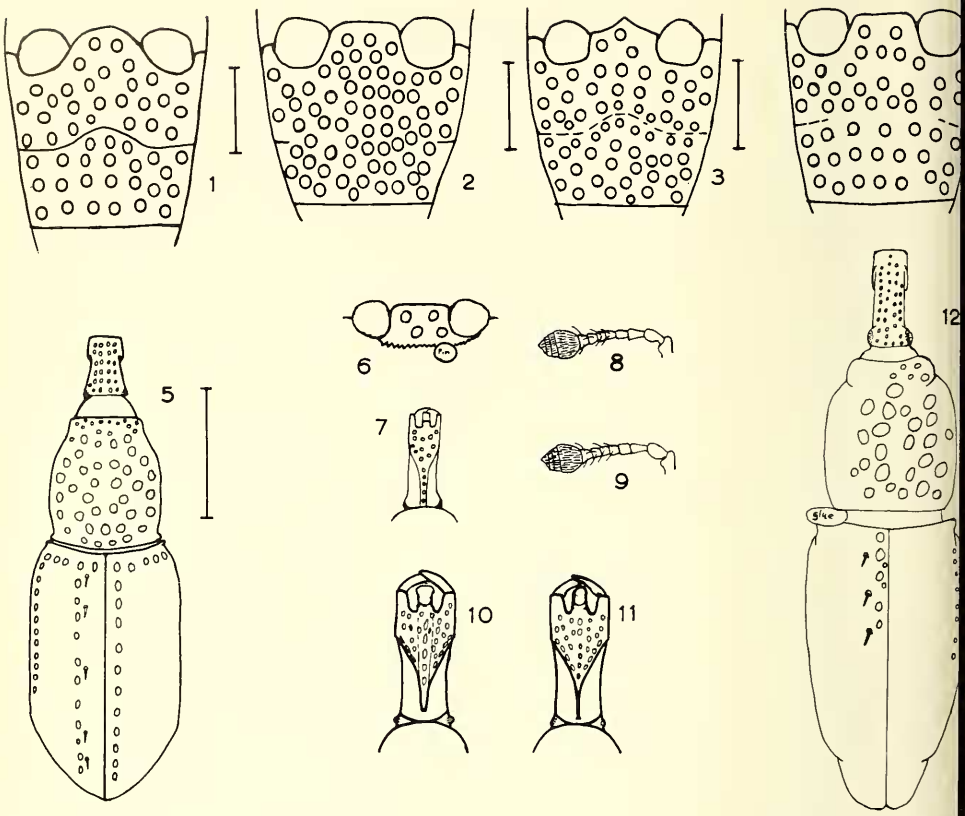

Figure 1. Abdominal sternites 1 and 2 of *Lymantes puteolatum puteolatum* (Dury). *Figure 2.* Same of *Lymantes puteolatum dietrichi* Sleeper. *Figure 3.* Same of *Lymantes arkansasensis* Sleeper. *Figure 4.* Same of *Lymantes sandersoni* Sleeper. *Figure 5.* Dorsal outline of *Lymantes puteolatum puteolatum* (Dury). *Figure 6.* Remainder of abdominal sternite 1 of *Lymantes scrobicollis* Gyllenhal (Holotype). *Figure 7.* Ventral side of rostrum of *Lymantes scrobicollis* Gyllenhal (Holotype). *Figure 8.* Funicle and club of *Lymantes scrobicollis* Gyllenhal (Holotype). *Figure 9.* Funicle and club of *Lymantes puteolatum puteolatum* (Dury). *Figure 10.* Ventral side of rostrum of *Lymantes arkansasensis* Sleeper. *Figure 11.* Ventral side of rostrum of *Lymantes puteolatum puteolatum* (Dury). *Figure 12.* Dorsal outline of *Lymantes scrobicollis* Gyllenhal (Holotype). Figures 1-5 and 12, line equals one mm. Figures 6-11 not to scale.

KEY TO THE NORTH AMERICAN FORMS OF *Lymantes*

1. Humeri behind with obvious emargination, emargination extending downward toward extreme lateral edge of elytra .... *scrobicollis* Gyllenhal
1′. Humeri without such emargination 2
2. Gular area between the scrobes with prominent lateral carinae, the groove between the carinae with punctures (fig. 10) 3
2′. Gular area between the scrobes with the lateral carinae fusing to form a single carina for most of their length (fig. 11) 4
3. Intercoxal process of first abdominal sternite projecting forward at middle (fig. 3) ..... *arkansasensis* new species
3′. Intercoxal process without a median projection (fig.4) .... *sandersoni* new species
4. Eighth elytral interval with sharp carina in apical third; apical comb of tibiae one with 10 spines, 2 with 8-9, 3 with 8-9 .... *puteolatum puteolatum* (Dury)
4′. No elytral intervals formed into sharp carinae; apical comb of tibiae one with 6 spines, 2 with 8 and 3 with 6 .... *puteolatum dietrichi* new subspecies

Lymantes scrobicollis Gyllenhall

Figures 6, 7, 8, and 12

Lymantes scrobicollis Gyllenhall, *In* Schoenherr, 1938:1086.

Holotype. "Am. Borealis" with following labels: #1 "Typus" (red label), #2 "Lymantes scrobicollis Gyll."; #3 "3" (pink label) in Stockholm.

Sex undetermined. Length 3.28 mm., width 1.2 mm. Surface, especially of the elytra, with a dull iridescent luster, much as in *Ithaura*.

Rostrum as in generic description. Mandibles overlapping. Scrobes passing inferior, the raised gular area between with limiting carinae, between which there is a punctate groove. Ocular area protruding but not visibly faceted. Antennae as in generic description. Head globular, behind the constriction of the rostrum an alutaceous area. *Prothorax* nearly straight sided the apical constriction more or less pronounced laterally but not extending across the disc, disc flat, the punctures large and very irregular. *Elytra* as in generic description; slightly more than one-half longer than broad; humeri with an

obvious emargination which extends toward extreme lateral edge of the elytra and is denuded of the film; striae with rows of shallow fovae which are not connected longitudinally by grooves on the disc but forming grooves on declivity; intervals narrow and slightly convex, with suberect amber setae most of which are missing; on declivity distinctly convex. *Venter* with prosternum convex in front of forecoxae; forecoxae very narrowly separated, mesocoxae separated by less than one-fourth diameter, metacoxae separated by about twice the diameter. Abdominal sternite one with the intercoxal process feebly arcuate. Femora, tibiae and tarsi as in generic description.

Distribution. The type was only indicated as from "Am[erica] Borealis." The elytra of what is probably this species has been taken by the author while sifting litter in Highlands Hammock, Florida. No living or complete individuals were encountered.

Unfortunately at the time the type was examined complete descriptive data were not taken. The above description is based on the notes taken at time of examination. The holotype is in poor condition. The prothorax is held on by a patch of glue on the left side, which obscures the emargination in part. The tarsi are mostly broken, only one of the third intact. The antennae were intact. The abdomen was almost entirely absent. In rostral structure this species is quite like those forms described below from west of the Mississippi River, but in body form it is nearer *puteolatum puteolatum*. From the latter *scrobicollis* differs in being smaller, in the structure of the gular area of the rostrum; the rostrum in dorsal view on *puteolatum* appears a little wider so that the broad sulcus paralleling the upper edges of scrobe is distinctly visible while scarcely so in *scrobicollis*; in *puteolatum* the apical part of the rostrum is broader and therefore more distinctly set off from the basal part; in *scrobicollis* the elytra are more tapering posteriorly; in *puteolatum* the elytra are somewhat widened posteriorly. The shape of the humeri in the two is quite different. On *scrobicollis* the film is more evident.

Lymantes puteolatum puteolatum (Dury), new combination
Figures 1, 5, 9, and 11

Typhloglymma puteolatum Dury 1901:243. (Type supposedly in the Charles Dury Collection at the Cincinnati Museum of Natural History.)

Female. Length 3.4 mm., width 1.3 mm. Slender, elongate, feebly depressed on dorsum; reddish black often covered with a dirty gray

film; antennae black; very sparsely clothed with scattered yellow reclinate to erect setae.

Rostrum length 0.85 mm., width at base, antennal insertion and apex 0.33 mm., just behind antennal insertion 0.25 mm., three-fourths as long as prothorax; feebly arcuate in lateral aspect, thickness 0.25 mm.; deeply, rugosely punctate, the line of punctures just above dorsal edge of scrobe coalescent, more or less forming a groove. Scrobes passing inferiorly and forming a very narrow carinae in posterior third. Antennae inserted at apical third; scape reaching lower part of ocular area; funicle clothed with a dirty film and long sparse setae, segments with exception of first two quadrate, ratio 1.0:1.0:0.6:0.6:0.5:0.6:1.0. Club oval, basal segment constituting one-half the mass of the club and sparsely clothed with setae, remaining 3 segments densely clothed with short fine setae. *Head* globose, smooth, very minutely punctate at a magnification of 130x. Ocular area on base of rostrum feebly granulate and prominent. *Prothorax* about one-fifth longer than wide, the sides feebly arcuate, apical constriction pronounced but not continuous across dorsum, disc more or less flattened, very coarsely punctured, the latter separated by one-half or more their diameter and each with a short erect setae, punctures on sides more closely placed. *Elytra* one-third longer than wide and one-third longer than prothorax, humeri not pronounced but a carina that borders anterior edge of elytra gives the appearance of humeri; side more or less arcuate, widening to beyond apical third then convergent to apices; disc somewhat depressed but not as much as that of prothorax; striae 7 and 8 not reaching base of elytra, 9 complete, 10 present only in basal third, the striae not impressed, the punctures very deep, quadrate, each with a very short scale; intervals feebly convex, the eighth carinate in apical third, all intervals shining frequently interrupted by transverse grooves, especially laterally, each interval with a single row of very distant erect slender yellowish setae and minute punctures. *Venter* except for the prosternum without coating or film; punctures coarse and with short setae; prosternum not passing between coxae; in front of coxae strongly convex with a transverse groove of the apical constriction cutting deeply into it. Forecoxae subcontiguous with a shallow depression behind; mesocoxae separated by one-third width of coxae, a short triangular projection of mesosternum between; metasternum strongly, transversely convex and coarsely punctured, metacoxae separated by nearly two and one-half times

width of coxae; intercoxal process of abdominal sternite one arcuate, abdominal sternites flattened, very coarsely irregularly punctured, suture between one and 2 deep at sides very feebly evident at middle, the remaining sutures very deep. First two sternites subequal, each three times longer than 3 and 4 combined, the 5th three-fourths as long as second, its apex evenly rounded. Femora one strongly clavate, 2 and 3 feebly clavate, all unarmed. All tibiae nearly as long as femora, flattened, all with a longitudinal groove on inner edge. Tibiae one with 10 apical spines, 2 with 8-9, 3 with 8-9. Tarsi about one-third as long as tibiae, first two segments very short and inconspicuous, third longer than two preceeding combined, but not lobed, fourth segment slender, slightly longer than third. Claws stout and divergent.

The above description, for the most part, was drawn from a female specimen in the E. L. Sleeper Collection (ELS) from Hamilton Co., Redbank, VI-10-51, ELS, near Cincinnati, Ohio. Efforts to find the type of this species in the Dury Collection in August, 1961, proved fruitless. In 1955 this specimen was compared with the type which was then in the collection. The type was also a female, somewhat larger (4.0 mm.) but was otherwise nearly identical to this example. In 1951 a second example was in the collection of Dr. Joseph Wright of Cincinnati, Ohio, from Adams Co., Ohio, Ralph Dury Collr.

Lymantes puteolatum dietrichi, new subspecies

Figure 2

Typhloglymma puteolatum Dietrich 1942:178.

Holotype. Mississippi, Lucedale, XII-4-30, H. Dietrich, in Entomological Collections, Cornell University.

Female. Length 3.25 mm., width 1.3 mm.; reddish brown; proportionately shorter and broader than *puteolatum puteolatum* and differing in addition to the characteristics mentioned in the key by more distinctly impressed striae, more convex intervals of elytra; venter very feebly shining, the punctures of the first two abdominal sternites evenly, closely placed, separated by less than one-half their diameter (in *puteolatum puteolatum* irregularly placed and most separated by their own diameter); the suture between one and 2 connate but evident, not impressed at sides.

Male. Differing from the female by a slightly shorter rostrum and very feebly concave abdominal sternites one and 2.

Type material. Two paratypes, one ♂, same locality as holotype,

XII-30-30, H. Dietrich in (ELS), length 3.28 mm., width 1.4 mm.; 1 ♀, same locality, IV-24-31, H. Dietrich, in (USNM), length 4.2 mm., width 1.6 mm., slightly darker than the holotype, hind legs missing and all tarsi missing except front right one. All specimens were taken from beneath bark.

Lymantes arkansasensis, new species
Figures 3 and 10

Holotype. Arkansas, "Washington-Benton Co.", 1959, in (ELS #75).

Female. Length 3.25 mm., width 1.25 mm.; reddish brown. Differing from *puteolatum puteolatum* by the characteristics outlined in the key, and by color, the distinctly convex, more coarsely punctured prothorax, the latter with arcuate sides and a pronounced apical constriction; elytra with surface duller than prothorax due to alutaceous derm; the venter with forecoxae very narrowly separated with prosternum extending between; with first two abdominal sternites concave, the abdominal suture between one and 2 absent.

Male. Unknown.

Type material. Holotype and one paratype; the latter with same data as holotype and a length of 3.6 mm. and width 1.3 mm.

The type material was taken by Berlese funnel sampling of woodland litter.

Lymantes sandersoni, new species
Figure 4

Holotype. Missouri, (Iron Co.) Anapolis, Champion Spring, VIII-19-49, G. A. Ulrich acc. 49572 in Collections of Illinois Natural History Survey.

Female. Length 3.5 mm., width 1.3 mm. In addition to the characteristics indicated in the key this species differs from *puteolatum puteolatum* in that *sandersoni* is not shining, but dull due to an alutaceous derm; the rostrum and general form is more slender with the ocular area at base of rostrum small and only feebly indicated; the punctures of the disc of prothorax are much coarser; the elytra with striae moderately impressed; intervals carinate becoming subcarinate at sides, with very few indications of transverse interruptions; punctures of intervals much larger; venter with prosternum extending between forecoxae, separating them by about one-eighth their transverse width; intercoxal process of abdominal sternite one feebly arcuate.

The unique holotype was taken from debris at the mouth of a cave. It is a pleasure to name this species in honor of Dr. Milton W. Sanderson of the Illinois Natural History Survey.

Acknowledgments

I wish to express my thanks to the following individuals: Dr. Henry Dietrich of Cornell University (retired), Dr. Milton W. Sanderson of the Illinois Natural History Survey, Mrs. Rose Warner Spillman of the United States National Museum, and Dr. L. O. Warren of the University of Arkansas for the loan of material in this and related genera; to Mr. Ralph Dury of the Cincinnati Museum of Natural History for courtesies extended while at that institution; to Mr. Vincent Caccese of California State College at Long Beach and Miss Marda L. West of the University of California at Los Angeles for aid in securing library references.

Literature Cited

DIETRICH, HENRY

1942. *Typhloglymma puteolatum* Dury (Coleoptera: Cossoninae). *Bull. Brooklyn Ent. Soc.*, 37:178.

DURY, C.

1901. A new Calandrid from Cincinnati, Ohio. *J. Cincinnati Soc. Nat. Hist.*, 19(8):243-244, illus.

GILBERT, E. E.

1956. The Raymondionyminae weevils of California, with a description of a new genus, and several new species. *Pan-Pacific Ent.* 32(2):55-72, illus.

KISSINGER, D. G.

1964. *Curculionidae of America north of Mexico. A key to the genera.* South Lancaster, Massachusetts: Taxonomic Publications, 143 pp., illus.

SCHOENHERR, C. J.

1838. *Genera et species curculionidum, cum synonymia hujus familiae.* Vol. 4, pt. 2:601-1121. Paris.